

Serial No.: 09/505,459
Attorney Docket No.: KOT0008

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#12/Dec.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)
T. OSHIBA et al.)
Serial No.: 09/505,459) Art unit: 1753
Filed: February 11, 2000) Examiner: Janis L. Dote
For: TONER AND DEVELOPER FOR)
DEVELOPING ELECTROSTATIC)
IMAGE AND IMAGE FORMING)
METHOD)

DECLARATION UNDER 37 C.F.R. 1.132

Honorable Commissioner of Patents
and Trademarks
Washington, D.C. 20231

Sir:

- I, Hiroshi Yamazaki hereby declare and say as follows:
1. I am a citizen of Japan residing in Tokyo, Japan.
I graduated from Yokohama National University in March 1979, with a Master's Degree in Applied Chemistry. I have been employed by Konica Corporation and have been engaged in research and development of electrophotographic material since April 1979. Mr. Ken Ohmura and I are co-inventor of the subject matter of this Application. I am a co-worker of Mr. Ken Ohmura, and recognize his declaration filed on June 15, 2001, and experiments stated in the declaration in the instant application.

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2. Ken Ohmura and I read the outstanding Office Action as well as cited references, particularly Kobayashi, Ugai, Sato and Nakamura the primary references to main claim of the instant application. The experiments were conducted under Mr. Ken Ohmura and my supervision to show the toners referred to by the Examiner and described in these references are distinguished from those claimed in the instant application.
3. Claims 1-4, 8-12 are rejected under 35 U.S.C. § 102 (b) as being anticipated by, or under 35 U.S.C. § 103 (a) obvious over US 5,376,493 (Kobayashi). The Examiner refers to Example 3. Toner sample K was prepared in accordance with the description of Example 3 of US 5,376,493 (Kobayashi). A jet mill was employed to pulverize colored resin in the preparation of toner particles since no other measure was disclosed by Kobayashi than jet-mill.
4. Claims 1-4, 8-12 are rejected under 35 U.S.C. § 102 (b) as being anticipated by, or under 35 U.S.C. § 103 (a) obvious over US 5,856,055 (Ugai), and the Examiner refers to Samples Q and R. Toner samples Q and R were prepared in accordance with the description of US 5,856,055 (Ugai), Samples Q and R, respectively. The toner particles were prepared by polymerization method known as a suspension polymerization in the art.
5. Claims 1-3, 8-12 are rejected under 35 U.S.C. § 102 (b) as being anticipated by, or under 35 U.S.C. § 103 (a) obvious over US 5,645,967 (Sato), and The Examiner refers to Example 23. Toner sample S was prepared in accordance with the description of Example 23. A jet mill was employed to pulverize colored resin in the

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preparation of toner particles since no other measure was disclosed by Kobayashi than jet-mill.

6. Claims 1-3, 5, and 8-13 are rejected under 35 U.S.C. § 102 (e) as being anticipated by, or under 35 U.S.C. § 103 (a) as obvious over US 6,238,836 (Nakamura), and Examiner refers to embodiment 6. Toner sample S was prepared in accordance with the description of Example 23. A jet mill was employed to pulverize colored resin in the preparation of toner particles since no other measure was disclosed by Kobayashi than jet-mill.
7. Content and isolation ratio of each toner were measured in the same way as disclosed on page 35 of the instant specification. Developers employing each toner were prepared and image formation test was conducted employing the obtained developer in the same way as disclosed on pages 36 to 37. Element, its content and isolated ratio in each toner and test results are shown in the following table, in addition to part of Table of the specification on page 38 for the convenience of comparison.
8. The isolated ratio of the samples described in the cited references does not fall within the value recited in claim of the instant application. Consequently the instant invention as claimed is not anticipated by the cited references.
9. Developer samples were prepared by employing the toner samples obtained above in accordance with the description of "(2) Preparation of developer" at page 36 of the instant application. Charging amount of each Sample of the cited references reduces about half after 10,000 copies from the initial time. The difference between the initial time and after 10,000 copies are

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much larger than the samples of the invention. Further, for all samples of the cited references fog is formed. The tests for all samples were conducted by employing a printer KL2010, having a non-contact jumping apparatus, containing at least a toner height regulating member and application of alternating bias, manufactured by Konica Corporation, for fair comparison. The result are shown in the Table.

10. Charging amount of the comparative samples decrease to about half of that of initial stage, and fog is found in every comparative samples at 10,000th copy. The inventive samples maintain the charging amount in comparison with the comparative samples, and no fog is found after 50,000 copies. The difference is unexpected.
11. The sample toners of the cited references gave sufficient result for 50,000 copies in each reference. However these samples are not satisfactory for 10,000 copies by our test. I presume the difference is caused by the difference of printer employed in the test, since the printer KL2010 has special developing apparatus stated above.

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	Specified element in toner			Kind of carrier	Charging amount		Formation of fog
	Kind	Content (% by weight)	Isolated ratio		Initial time	After 10,000 printing	
Sample K (Kobayashi)	Cu	0.67	12.6	carrier 1	-28.4	-14.1	Fog found
Sample Q (Ugai)	Fe	0.22	18.3	carrier 1	-31.4	-17.4	Fog found
Sample R (Ugai)	Fe	0.13	13.7	carrier 1	-29.8	-14.8	Fog found
Sample S (Sato)	Cr	0.14	14.2	carrier 1	-24.6	-13.1	Fog found
Sample N (Nakamura)	Mo	0.49	14.4	carrier 1	19.0	10.7	Fog found
Example 5	Cu	0.29	2.7	carrier 1	-29.1	-25.7	None
	Cr	0.20	0.5				
Example 6	Cu	0.29	8.6	carrier 2	-20.7	-15.8	None
Example 7	Cu	0.29	5.7	carrier 2	-20.1	-16.1	None
Example 8	Cu	0.29	2.7	carrier 2	-20.2	-16.9	None
Example 9	Cu	0.27	0.7	carrier 2	-20.1	-19.1	None
Example 10	Zn	0.20	2.5	carrier 1	-22.1	-19.6	None
Example 11	Zn	0.20	2.1	carrier 1	-23.4	-21.2	None
Example 12	Cr	0.16	2.3	carrier 1	-24.7	-21.9	None
Example 13	Cr	0.16	1.9	carrier 1	-25.1	-23.2	None
Example 14	Cr	0.15	1.1	carrier 1	-25.5	-23.8	None
Example 15	Fe	0.13	1.5	carrier 1	-24.6	-23.1	None
Example 16	Mo	0.80	1.7	carrier 3	23.5	22.2	None

The undersigned declares further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the

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knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the U.S. Code and that such willful false statements may jeopardize the validity of the above-identified application or any patent issuing thereon.

Hiroshi Yamazaki

Hiroshi YAMAZAKI

Dated: This 4th day of July, 2002.